

ACTIVATION SPECIFICATIONS

FOR TANKERS

T1-MET-24a

APPLICABLE TO:

M/V ALATNA

M/V CHATTAHOOCHEE

PHASE V ACTIVATION

TABLE OF CONTENTS

<u>PAGE</u>	<u>NO</u>	<u>ITEM</u>
4	100	GENERAL
4-6	105	GENERAL NOTES
7	109	DELIVERY OF SHIP
7	111	MOORING OF VESSEL
8-9	112	CONTRACTOR MILESTONE SCHEDULE
9	116	LIVING AND WORK SPACES
9	120	OPEN ITEM
10	125	DOCK TRIALS AND SEA TRIALS
10	125.1	DOCK TRIALS
10-11	125.2	SEA TRIALS
11	126	VESSEL DELIVERY
12	200	ENGINEERING
12	205	DIESEL ENGINES AND PROPULSION SYSTEM
12-13	215	STEERING GEAR AND FOLLOW UP SYSTEM
13-15	220	CENTRIFUGAL PUMPS FRESH & SALT WATER SYSTEMS
15	225	CARGO OIL/BALLAST PIPING AND PUMPS
16	230	FRESH, POTABLE AND DRINKING WATER SYSTEMS
16	235	SALTWATER SYSTEMS
17	240	SANITARY, SOIL AND DRAIN PIPING
17	245	MSD ACTIVATION
17	250	OPEN ITEM
17	255	AIR COMPRESSORS AND PIPING SYSTEMS
18	260	BOILERS
18	262	EVAPORATOR AND HEAT EXCHANGERS
19-20	265	STEAM HEATING AND CONDENSATE PIPING SYSTEMS
20	270	LUBE AND DIESEL OIL PURIFIERS
21	280	OIL AND WATER SEPARATOR
21	282	OILY BALLAST WATER MONITOR
21	285	OPEN ITEM
21	290	SHIP'S REFRIGERATION & AIR CONDITIONING SYSTEMS
22	300	ELECTRICAL
22	305	CATHODIC PROTECTION SYSTEM
22-23	310	DEHUMIDIFICATION SYSTEM
24	315	FLOODING ALARM SYSTEM
24	320	SHIP'S LIGHTING SYSTEMS
24	322	CARGO, DEBARKATION, SIGNAL & SEARCH LIGHTS
25	325	CARGO PUMP REMOTE SHUT-DOWN SWITCHES
25	330	INSULATION (MEGGER) READINGS
25	360	GALLEY EQUIPMENT
26	370	BATTERIES
26	380	RADIO EQUIPMENT
27	385	NAVIGATION EQUIPMENT
27	387	WIND INDICATORS

TABLE OF CONTENTS, Continued

<u>PAGE</u>	<u>NO.</u>	<u>ITEM</u>
28	400	HULL
28	402	HULL BLANKS
29	403	PROPELLER CLEANING
29	405	LIFEBOATS, DAVITS AND WINCHES
30	406	INFLATABLE LIFE RAFTS
30	408	RING LIFE BUOYS
30-31	415	FIRE FIGHTING EQUIPMENT
31	433	WEATHER DECK SCUPPERS AND DRAINS
31	435	HOSE GEAR
32-34	445	WATERTIGHT AND WEATHER-TIGHT CLOSURES
35	447	VENTILATION TERMINALS
36	490	NAME BOARDS

100 GENERAL

ITEM 105 GENERAL NOTES

The Contractor shall prepare a detailed activation schedule which includes labor by crafts, services, equipment and material divided into 4-hour increments. The schedule shall include each item of these specifications.

During the activation the Contractor shall provide the following services:

1 **Services:**

a. Fire Protection: provide three (3) fire stations located at the bow, amidships, and stern with 7bar (100 psig) pressurized manifolds and enough hose fitted with all-purpose type nozzles to reach all weather deck and internal locations on the vessel.

b. Electric Power: 250 amps, 440 volts AC, 3 phase, 60 hertz.

CAUTION Proper phasing shall be insured immediately upon connection to prevent damage to the equipment.

2. Office Space: provide separate dockside office space for CMS and MARAD representatives. Each office to have a minimum of 50 square meters of floor space, be adequately lighted, heated and air-conditioned. Each office is to be furnished with a minimum of two desks and chairs, one file cabinet, one book shelf, two steel hanging lockers, one meeting/service table with four chairs; 100 - 120 VAC, 50 to 60 Htz electrical power is to be supplied from a minimum of four, two plug jacks with ground; one each phone for overseas direct dialing, one local phone for domestic and international calls; Western Style male and separate female toilets and washing facilities shall be available close to the designated offices.

3. Meals and Accommodations and Transportation: Provide Western style rooms and meals (breakfast, lunch, and dinner) per the following schedule:

a. MARAD and CMS Representatives, total six each single rooms with private baths, for total 12 nights with option to hold two or more rooms for a period of 180 days following activation's of any one or all vessels. These rooms shall be equipped with a telephone capable of international calls by direct dialing and credit cards, one each computer modem connection to each phone, 24 hour satellite TV reception with at least one English news and separate movie/entertainment channel, and a small service refrigerator.

b. Total six ship's officers, single rooms with private baths for a total of eight nights. The rooms to include telephone for local and international calls, and local channel TV entertainment.

ITEM 105

GENERAL NOTES continued

- c. Eight crew (2 persons per room), estimated six nights with shared bath facilities. Telephones to be coded for local calls only. A TV for local channel entertainment shall be provided in each room.
- d. Hotel services shall include daily bed and linen changing, daily room and bath cleaning, days; and transportation between accommodation to/from vessel for meals, morning midday and evening if the walking distance exceeds 1 kilometer one way. Charges for laundry, meals, telephone, room refrigerator drinks and snacks, and other miscellaneous hotel services shall be billed directly to each occupant.
- 4.. Vessel Telephones: provide 24 hour telephones: one (1) phone for ship's office, and one (1) Contractor/local phone for ship's quarter-deck. The ship's office phone shall be provided with International direct dialing service; these phones shall be available within 24 hours of the Notice of Activation.
- 5. Garbage and Debris Removal: The Contractor shall provide garbage bins or dumpsters onboard the vessel for collection and removal on a daily basis. Where port regulations apply, additional collection bins shall be provided as required for separation and/or recycling. Written notice of the requirements, in English, shall be made available to the CMS Representative and ship's master at the beginning of each activation.
- 6. Firewatch: required for all burning, welding, and heating operations. Firewatch shall be equipped with suitable Contractor furnished fire extinguisher and shall be aware of the location of the nearest fire hose. Access to the Contractor UHF radio system is highly desirable.
- 7. Cleaning: the Contractor shall remove on a daily basis all dirt and debris generated as a result of work specified. Any and all damage to ship's paint, tile, structure, fixtures, equipment, and machinery occurring in Contractor's yard shall be restored per ship's painting specifications at the Contractor's expense.
- 8. Crane Service: the Contractor shall provide crane and rigging service for handling stores and ship's equipment. The service shall consist of crane and operator and a 2-man rigging crew. A total of 40 hours crane and rigging service shall be used for estimating purposes (40 hours crane, 40 hours operator, 80 hours rigging). Hours and cost will be adjusted upward or downward, as appropriate, at end of the activation.
- 9. Labor and Materials: the Contractor shall provide labor, materials and services to accomplish all work in these items unless otherwise specified. Hourly labor rates by category and material costs shall be as documented in the Contractor's contract with Crowley Marine Services, Inc.

ITEM 105 GENERAL NOTES continued

10. Government Furnished Material: the Contractor shall take delivery of all Government Furnished Material (GFM), whether stored on board ship or delivered to the Contractor's covered storage yard or warehouse, and shall store, preserve, and protect it as required. The Contractor shall provide, if required by the CMS Representative, a secure storage area for those items removed from the ship during activation, and operation to include hull and topside blanks; cathodic protection system; D/H system hoses and fittings; stack covers; and flooding alarm equipment.
11. Workmanship: all materials and workmanship shall be in accordance with good marine practice, regulatory requirements, and this specification.
12. Testing: the Contractor shall be responsible for pre-testing all work and for timely notification of the CMS Representative and cognizant ship's officer of all events that will require on-site inspection. Successful tests only will be accepted. Any pre-testing required shall be at Contractor's expense.
- 13.. Schedule: Contractor shall work ship on an around-the-clock seven-days-a-week basis. A tentative milestone schedule is attached. Note: the vessel must depart on 24-hour sea trials before the end of the ninth day, in adequate time for local area delivery to the Military Sealift Command (MSC) before the end of the tenth day. All activation work shall be completed by the time the ship departs for sea trials.
14. Deck Protection: Provide suitable temporary deck protection on interior passageways, master's office, chief engineer's office, crew mess, officers mess, and other high traffic areas as designated by the CMS Representative. A minimum of 7mil thick covering, securely taped to the deck shall be used. The covering shall be removed from the vessel prior to departing on sea trials.
15. Gas Free Certification: One the first day of activation a certified chemist shall inspect all ships cargo, void, tank, bilge, storerooms to ascertain that they are, or are not, safe for entry, including burning and welding. Results shall be posted at the ship's gangway, delivered to the MarAd and CMS Representatives, the vessel's master and chief engineer. Daily and frequent re-inspections shall be made of all suspect, sensitive and confined work areas of the vessel. Daily reports are to be distributed per the above. Please note the specific referrals to gas free certification in the following specifications.

ITEM 109 DELIVERY OF SHIP

Unless specifically requested by the Contractor, and agreed to by the MarAd and/or CMS Representatives, the vessel shall be activated at its assigned lay-berth.

1. In the event that it is agreed to move the vessel, the Contractor shall provide the following services:
 - a. Marine Safety Agency and local Harbor Master clearances;
 - b. Pilots, tugs, line handlers and riding crew;
 - c. Towing tugs, escort tugs, locally required lights, signals and other regulatory requirements.
 - d. Electricians and engineers to supervise shore connections and ships' generator utilization.

CAUTION Proper phasing shall be insured immediately upon connection to prevent damage to the equipment.

ITEM 111: MOORING OF VESSEL

1. At Minimum, the vessel shall have available three each braided or three-strand, minimum 8 inch circumference, synthetic mooring lines forward and aft, as necessary for safe and secure mooring. Additionally, for the purpose of nesting the tankers, two "Yokohama" type fenders are available on each vessel. The mooring berth shall provide adequate clearance under the keel for all stages of tide. Additional services and facilities shall include:
 - a. Salt or fresh water fire main under continuous pressure for emergency service at a minimum of 100 psi.
 - b. Commercial fresh or potable water service line.
 - c. Adequate lighting for night boarding and disembarking.
 - d. Adequate free and clear vehicle access to the vessel.
 - e. Telephone service line Per Item 105.4 above.
 - f. Electric power per Item 105.1 above.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 112 SHIPYARD MILESTONE SCHEDULE

The following information is provided as a guideline only. The Contractor is to develop and follow a detailed schedule without regard for the arrival of CMS and MarAd personnel. The schedule shall be developed and submitted to CMS Representative within 15 days of contract award.

- Day 1: Ship at layberth. Contractor provides temporary electrical power, fire and flooding protection, and necessary personnel for inspection and activation of machinery and equipment. Start equipment close-ups, D/H system, cathodic protection system and hull blank removals. Do initial gas free certification and commence daily re-inspections.
- Day 2: Remove D/H equipment and cathodic protection equipment. Continue removals, close ups, tests, and repairs. CMS Representative and staff, Master, Chief Officer, Chief Engineer, First Engineer, Bosun arrive at Contractor.
- Day 3: Clean quarters. Activate and test galley equipment. Start reefer machinery and commence reefer box cool down. Reassemble fixed CO² systems, manually test all remote actuators before connecting cylinder hoses. Lay-out and connect fire hoses for pressure testing if required. Ship's crew commences safety and fire fighting equipment inspection and deployment.
- Day 4: Activate potable water, sanitary and heating, ventilation and air conditioning equipment. Remove smoke stack covers and light off ship service generators. Start preliminary storing for Galley and Sanitary. Do life boat davit weight test if required. Test steering gear and controls. CMS contracted Radio and radar/electronic technicians on board. Activate all ship's communication and navigation electronics. Ship's crew assists USCG with safety and fire fighting equipment tests, inspections and inventory.
- Day 5: Complete work on cargo systems, test operate all pumps, valves and vents. Remove flooding alarms and secure onboard per ship's Chief Officer or the CMS Representative. Ship's crew and concerned inspectors (CMS, ABS, USCG) inspect cargo tanks preparatory to close up. Ship's crew moves onboard; loads sea trial ballast, receives provision order and stows onboard; continues USCG inspection of safety and fire fighting equipment; stows and secures lifeboats for sea.
- Day 6: Complete test of auxiliary machinery systems on shore power. Run main engines and test all pneumatic control systems for air and auxiliary machinery. Test emergency generator, boilers and evaporators. Accomplish preliminary cargo system tests. Purify lube and fuel oil prior to light off for dock and sea trials. Ship's crew continues USCG and ABS inspection support, vessel systems indoctrination. The crew attends a first aid and safety meeting. Receive fuel, lube, and balance of stores, set crew's gangway security watches.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 112 SHIPYARD MILESTONE SCHEDULE continued

- Day 7: Remaining crew moves aboard and ship starts feeding. Test anchor windlass, deck winches, capstans preliminary to sea trial. Complete inspecting and storing lifeboats and inflatable rafts. Test boat davits and winches. Check out navigational equipment and lights. Test laundry services.
- Day 8: Dock trials. Final cleanup, securing of loose gear, and storing of ship. Prepare for sea. Complete outstanding ABS and USCG items other than sea trial items. All crew aboard and signed on. Set sailing board. Complete final adjustments and alignments all systems. Test navigational systems. Set sea watches. Test steering engine, evaporators, and vital auxiliary systems. Depart for 24-hour sea trials. The Contractor provides a pilot, two machinery engineers, two electrical engineers, one hull engineer during the sea trial. Accommodations, prepared meals and messroom services will be provided by the ship's crew.
- Day 9 & 10: Main engines will be run at full power for 16 hours to demonstrate satisfactory operation. Prove operational effectiveness of cargo pumps, fire pumps, fire main, alarms, evaporators, boiler, bilge and ballast pumps, emergency generator, etc. Test steering system by: turning circle maneuvers; astern and ahead steering; emergency steering; "Z" maneuvering test, and emergency ahead to astern tests. Speed runs and full power tests should be accomplished at normal operating draft. This can be accomplished by filling selected cargo tanks with fresh water and discharging the water at sea to prove the pumps and cargo system. Removal of water and drying of tanks will be required prior to loading cargo. Complete sea trials and return to port to complete required repairs, services and outfitting as required. Deliver the vessel to the Military Sealift Command for orders on completion of the above.

ITEM 116 LIVING AND WORK SPACES

1. Prior to crew moving aboard ship thoroughly clean all spaces throughout ship. Wash all surfaces using Contractor supplied cleaner and disinfectant. Remove debris, sweep out and thoroughly clean all staterooms, refrigerators, lockers, closets, cabinets, drawers, medicine cabinets heads, sinks and toilets, carpets in Master's and Chief Engineer's staterooms, washrooms, laundry's, recreation rooms, accommodation block, passageways, pilot house, chart room, gyro room, radio room, offices, mess rooms, lounges, etc.

ITEM 120 OPEN ITEM

ITEM 125 DOCK TRIALS AND SEA TRIALS

125.1 Dock Trials

- a. Dock trials shall be accomplished on or before the eighth day of availability. CMS will provide clean fuel oil, clean lube oil, filters, etc., necessary for the operation of main engine propulsion train and vital support systems. Contractor provides line handlers and necessary additional mooring lines to properly secure ship during trials. In conjunction with ship's engineers Contractor shall operate main engines at low speed in both forward and reverse modes. The main engines, auxiliary engines, evaporator and boiler shall be operated for four (4) continuous hours to assure that all controls operate satisfactorily. Past experience dictates that twin screw ships, the ALATNA and CHATTAHOOCHEE are best operated with one engine ahead and one engine astern to reduce line loading and dock stress.
- b. CMS will supply fuel oil, lube and other oils for the trials. Fuel not consumed shall be left on board. Contractor shall supply potable water and shore power as required.

125.2 Sea Trials

- a. The Contractor shall provide a pilot, two machinery engineers, two electrical engineers, one hull engineer during the 24-hour sea trial. Bunks with linen will be provided onboard. Prepared meals and messroom services will be provided by the ship's crew. The Contractor provided technicians shall make all adjustments necessary to prove all machinery and auxiliary systems in satisfactory operating condition.
- b. During the sea trial the vessel's master assumes command on the behalf of the US Department of Transportation, Maritime Administration. The Contractor's pilot and engineers serve in the roll of advisors and technical consultants.
- c. Sea trials shall be accomplished in accordance with the US Maritime Administration's published guide "Operational Performance - Sea Trials" appended to this item. Included in the sea trials are:

Demonstration of Automation in All Modes
16-Hour Full Speed Ahead Endurance Test
5-Minute Astern Endurance Test
Ahead Steering Test
Quick Reversal - Ahead to Astern
Quick Reversal - Astern to Ahead
Anchor Windlass Test
Distilling Plant Test
Auxiliary Systems Test
Navigation Equipment Test
Communication Equipment Test
Mooring Equipment Test
Cargo Handling Equipment Test

- d. Contractor shall supply marine safety and local harbor master clearance, pilots, and tugs.
- e. CMS will provide vessels' master, officers and crew, fuel and lube oils, charts and navigation equipment for the sea trials.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 126 VESSEL DELIVERY

1. Delivery

During the vessel's activation, dock and sea trials a representative from the Military Sealift Command Pacific (MSCPAC) office in Oakland, California, or a representative from the Military Sealift Command Far East (MSCFE) office in Yokohama will be in attendance to witness each phase of the operation. With particular reference to the Sea Trial Check-Off List, the representative will approve the operation and performance of the vessel, the crew, specific and non-specific machinery items. On completion of the trial, depending on the vessel's operational assignment and the nature of its repair status, the ship will return to the Contractor to effect equipment repairs and other outstanding items noted. When satisfied that the vessel is in all respects ready for its assignment, the MSC or MSCFE representative will accept the vessel and dispatch it for voyage orders.

200 **ENGINEERING**

ITEM 205: **DIESEL ENGINES AND PROPULSION SYSTEM**

1. Service the air dryers for the control systems. Carefully check all air system components for proper operation.
2. Reassemble/reinstall all removals made to facilitate running the engines during the Phase IV maintenance cycle. Activate the two ALCO Model 12-251-E main engines, the three Caterpillar Model D353 generator engines, and the one Caterpillar Model D326F emergency generator engine.
3. Insure that the Contractor dock section and vessel's master have been advised of times for main engine start up and tests. Insure that cathodic protection anodes are secured clear of the water, that a bridge and mooring watch is set, that communications are established with the bridge and that the engine order telegraph and sound powered phones are operational.
4. Insure that the KaMeWa (Bird Johnson) CCP System and stern tube are set up properly per the ship's engineering operation manual.
5. Line up and activate the fuel oil service system to provide fuel under pressure to the engines.
6. Remove stack covers and store onboard per the Chief Engineer.
7. Insure stern tube lubrication system is set up properly per the ship's engineering operation manual.
8. Check liquid levels, replenish as necessary. Test run engines without load and prepare for dock trial.
9. Be sure propellers are clear and vessel is secure for test. Clutch in CPP system and test for operation ahead and astern. Return to 0 pitch and secure.

ITEM 215 **STEERING GEAR AND FOLLOW UP SYSTEM**

1. Remove and stow as directed the bolted steel blocks and securing wires from between ram cylinders and cross heads. Remove preservative from machined surfaces.
2. Pressure lubricate steering engine and controls in accordance with manufacturer's lubrication chart.
3. Check sumps and storage tanks and replenish to full capacity of hydraulic oil as necessary.
4. Check operation of failure alarms.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 215 STEERING GEAR AND FOLLOW UP SYSTEM continued

5. Prepare system and conduct an operational test during dock trial
6. Clean deck in way of any oil.

ITEM 220 CENTRIFUGAL PUMPS-FRESH & SALT WATER SYSTEMS

- DATA:
- (1) Boiler Feed Pumps Two (2) each
Mfr.: John Bean Co.
Model: LO-914 B-1 Horizontal Triplex Piston
 - (2) Evaporator Pumps One (1) each
 - a. Vacuum Pump:
Mfr.: Nash
Type: AT-34
 - b. Condensate Pump
Mfr.: Worthington
Model: 3/4 DN-4
 - c. Distiller Feed Pump:
Mfr.: Worthington Pump Company
Model: 20NF-52
 - d. Distiller Pump:
Mfr.: Worthington Pump Company
Model: 3/4 DN-4
 - e. Distiller Brine Pump:
Mfr.: Worthington
Model: 2 DNE-72
 - (3) Fire Pumps Two (2) each
Mfr.: Worthington Corporation
Model: 4-LV-10
 - (4) Bilge and Ballast Pumps Two (2) each
Mfr.: Worthington Corporation
Model: 3-RVS
 - (5) S.W. Booster Pump for 300 KW Diesel Engines Three (3) each
Mfr.: Worthington Corporation
Type: 3 MNE-52 Monobloc

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 220

CENTRIFUGAL PUMPS-FRESH & SALT WATER SYSTEMS continued

- (6) Duplex Vacuum Priming Unit One (1) unit Consisting of Two (2) Vacuum Pumps
Mfr.: Nash Engineering Company
Model: MD 571
- (7) Fresh Water Pumps Two (2) each
Mfr.: Worthington Corporation
Model: 1-1/4 TH-11
- (8) Gray Water Pumps Two (2) each
Mfr.: Chicago Pump Company
Model: VPMLMC-4
- (9) Hot Water Circulating Pump
Mfr.: Worthington Corporation
Model: 1-DNS-2 Monobloc
- (10) Stripping Pump and Tank: (In MSD Room)
Mfr.: Sarco
- (11) Hypo-chlorinator:
Mfr.: Wallace and Tierman
Model: A-429
- (12) Boiler Feed Booster Pumps
Mfr.: Carver Pump Company
Model: 1-1/4 SPL
- (13) Fire Bilge and Ballast Pump
Mfr.: Worthington Corporation
Model: 4-LV-10
- (14) Priming System for Fire, Bilge and Ballast Pump:
Mfr.: Nash Engineering Company
Model: MD 2 L
- (15) Cargo Pumps Five (5) each
Mfr.: Worthington Corporation
Model: 6-L-11
- (16) Cargo Stripping Pumps Five (5) each
Mfr.: Worthington Corporation
Model: 4 VEU

ITEM 220 CENTRIFUGAL PUMPS-FRESH & SALT WATER SYSTEMS continued

1. Inspect all centrifugal pumps located in engine room, auxiliary engine room, pump rooms, and MSD room. Insure that all components are closed for service, and that exposed shafts are clear and free for rotation. Rotate shafts by hand and lubricate as necessary. Test operate and prove ready for service, tighten packing as necessary. A list of pumps follows.
2. Rotate shafts by hand. Lubricate as necessary. Test operate and prove ready for service. Tighten packing as necessary. Pressure test sanitary and potable water with air to insure complete closure to prevent leakage in crew's spaces.

ITEM 225 CARGO OIL/BALLAST PIPING AND PUMPS

1. Activate the cargo oil /ballast system consisting of five cargo/ballast pumps (Worthington Corp. Model No. 6-L-11) and five rotary stripping pumps (Worthington Corp., Model No. 4-VEW) and associated piping and valves. Inspect all strainer baskets, remove and dispose of all debris. Re-install strainer baskets and close strainer covers using clean gaskets, new nuts and bolts as required. Replace pump and strainer drain plugs, close strainer drain valves. Test all pump bleeder valves and pipes to insure they are clear and operate correctly.
2. Rotate pumps by hand to insure rotor freedom. Lubricate all fittings with high pressure grease-guns. Inspect through-bulkhead shaft drive explosive seal to insure it seals properly and the shaft rotates freely. Megger test all pump motors.
3. Conduct a valve-to-valve 150 psi hydro-test of all cargo/ballast piping to insure system integrity and proper individual valve sealant freedom of manual operation without utilization of valve wrenches or spanners. Provide the CMS Representative with a written report on system test findings and required repairs immediately following the hydro-test.
4. Check all pressure gauges to insure operation and that all tubing is clear.
5. Attend system during activation and sea trial ballasting operations by ship's crew. Set each stripping ballast pump pressure relief valve to 125 psi using ballast water. Test operate the system at the direction of the CMS Representative.

ITEM 230 FRESH, POTABLE AND DRINKING WATER SYSTEMS

1. Reinstall any piping sections, valves, valve bonnets, and drain plugs removed during deactivation. Pressure test all systems to 50 psi. Check all faucets to insure operation and tight seal. Flush all lines and pumps with potable water treated with one US Gallon of Contractor-furnished chlorine bleach per five barrels of potable water (super-chlorinated water from water tank cleaning item may be used), then flush with fresh potable water. Pipe flushing shall be done in conjunction with tank flushing per the following.
2. Remove expanded metal screens from man hole openings of port and starboard potable water tanks located at 2-88-2 and 2-88-1 (ALATNA & CHATTAHOOCHEE). Retain screens for later use. Remove the welded 3-inch steel blanks from vents. Clean tanks as necessary. Fill potable water tanks with chlorine treated potable water per the above. Flush tanks and pipe lines at least one time, more if required. Fill tanks with fresh potable water to accommodate flushing the tanks and pipe lines. Refill tanks to 95% full with fresh potable water. Estimate a total of 52 tons potable water for CHATTAHOOCHEE and 96 tons for the ALATNA will be required for the full flushing and refill cycle.
3. After completion of super-chlorinating and flushing, take a sample of water from the faucet at the galley sink and send it to a laboratory for certification that the ship's water is free of fecal coliform bacteria, and that it is potable and safe to drink.

NOTE: M/V ALATNA has four (4) potable water tanks - M/V CHATTAHOOCHEE has two (2).

ITEM 235 SALTWATER SYSTEMS

1. Reinstall any piping, valves, valve bonnets, strainers, drain plugs, etc., removed to facilitate drying and circulation of D/H air, or to permit operation of the engines during Phase IV maintenance. Stow temporary cooling water hoses, piping as directed. Piping services involved are fire mains, sanitary systems, bilge and ballast system, and diesel engine lube oil and jacket-water coolers. Thoroughly flush piping to remove rust and scale from systems. Clean strainers removing all scale and sludge.
2. The ship's fire mains, pumps and valves shall be pressure tested to a minimum of 100 psi to insure integrity. Exceptions are to be immediately documented and brought to the attention of the CMS Representative for corrective action approvals.
3. After pumps are activated in Item 220 of these specs, conduct operational tests. Individual systems shall be pressure tested to the shut-off head of each respective pump. Exceptions are to be immediately documented and brought to the attention of the CMS Representative for corrective action approvals.

NOTE: This is a USCG item. USCG must witness tests of pressures.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 240 SANITARY, SOIL AND DRAIN PIPING

1. Reinstall any piping removals, and reassemble valve bonnets, traps, strainers, drain plugs, and manifold bonnets which were removed/disassembled to facilitate drying and air circulation
2. Charge sanitary system with water and check all systems for leaks.
3. Flush piping until clear rust-free water appears from drain valves at each toilet, DO NOT USE TOILET FLUSH VALVES TO FLUSH PIPING. Reassemble flush valves and prove proper operation following system flushing.
4. Adjust and test all flush valves. Replace any defective flush valves with owner's supplied spares.
5. Insure all drain lines are clear.

ITEM 245 MSD ACTIVATION

1. Reinstall access opening end plates in wet and media tanks for the St. Louis Ship Model 750 MSD. Reinstall drain plugs in the two discharge pumps and the Roots Blowers. Recharge with lube oil. Add biological starter to the system.
2. Rotate pumps and blowers by hand. Conduct operational test of system PRIOR TO USE OF TOILETS.
3. Test level controls on collection tank.

ITEM 250 OPEN ITEM

ITEM 255 AIR COMPRESSORS AND PIPING SYSTEMS

1. Check oil levels before operating.
2. Test operate compressors and check systems for leaks. Check relief valves for proper settings for USCG and ABS. Pressurize starting air tanks to prepare for diesel engine operation.

NOTE: This is a USCG item. USCG must witness tests of relief valve settings.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 260 BOILERS

1. Accomplish the following to the two boilers:
 - a. Pressure check mountings, set safety valves, and hydro test boilers to be witnessed by USCG & ABS.
 - b. Reassemble components.
 - c. Furnish enough boiler feed water for continued operation until evaporator is operational.
 - d. Coordinate Owner furnished services of Drew Chemical Company to set up test cabinet with glassware and test reagents.

NOTE: Proper boiler water treatment is crucial to the longevity of the steam coil! Inadequate or incorrect treatment will quickly result in a burned up coil.

- e. Conduct complete operational test to the satisfaction of CMS, USCG, and ABS.

ITEM 262 EVAPORATOR AND HEAT EXCHANGERS

1. Reassemble evaporator. Close up system by reinstalling all removed piping, valves, pump drain plugs, etc., removed during lay up.
2. Pressure test evaporator to locate any bad gasket or seals or heat exchanger or evaporator.
3. Test operate as soon as feasible after boiler is activated. Prove operation of evaporator, heat exchangers, controls, salinity indicator, etc.

ITEM 265 STEAM HEATING AND CONDENSATE PIPING SYSTEMS

1. Close up systems by reinstalling any removed piping, valves, traps, condensers, man hole covers, and inspection plates. Do Not Install access paneling in the quarters area until after systems are tested satisfactorily.
2. Air test the entire steam heating and condensate return systems to 2.5bar (37 psig) to the satisfaction of the CMS Representative.
3. A list of re-heaters, pre-heaters, convection heaters, galley steam equipment, engine room equipment, and miscellaneous tanks and heat exchangers follows.

a.	Re-heaters:	Location/System
	1-121-2	01-94-2
	1-129-2	01-96-1
	1-134-1	01-108-1
	1-121-1	01-108-2
	1-112-1	01-117-1
	1-114-2	01-117-2
	1-107-2	02-98-2
	1-101-2	02-98-1
	1-95-1	02-112-2
	1-95-2	02-110-1
	1-89-2	02-120-2
	1-15-2	
b.	Pre-heaters	
	02-122-2	
	02-122-1	
	1-103-2	
c.	Engine Room	
	LO Purifier Heater	
	FO. Purifier Heater	
	Whistle	
	Space Heaters (4 each)	
	Condensate Cooler (5 each traps)	
d.	Galley and Pantry	
	Hot water heater	1-118-1
	Dish Washer	1-118-0
	Steam table	1-115-1
	Steam kettles	1-111-1
	Steam table	01-114-1

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 265

STEAM HEATING AND CONDENSATE PIPING SYSTEMS continued

e.	Convection Heaters	Location
	3-87-0	Pump Room
	1-135-4	Steering Gear
	1-127-1	T & S
	1-120-3	T & S
	1-110-3	T & S
	1-104-3	T & S
	1-95-3	T & S
	1-94-4	T & S
	1-110-6	T & S
	1-110-2	T & S
	1-97-2	T & S
	01-91-4	T & S
	1-91-1	T & S
	1-97-1	T & S
	1-107-1	T & S
	4-20-0	Pump Room (4 each)
	2-20-0	Pump Room
	2-13-0	
	2-87-0	

f. Miscellaneous Tanks and Heat Exchangers

- (1) Boiler Feed Tank
- (2) Purifier Heaters
- (3) Heating System Drain Cooler

ITEM 270

LUBE AND DIESEL OIL PURIFIERS

1. Open up to insure disks are clean, and proper number are installed.
2. Rotate bowl unit to insure free rotation of bowl and motor.
3. Test unit for proper operation.

ITEM 280 OIL AND WATER SEPARATOR

1. Reinstall removed sections of piping and drain plugs in Nelson "Bilge Boy" oily water separator system. Install new cartridge. Close up.
2. Activate the bilge pump overboard line monitor and control system. Conduct a simulated test of the probe. Reassemble unit.
3. Reinstall Jabsco pump impellers, rotate by hand and lubricate if required.
4. Activate system and conduct operational test during dock trial.

NOTE: This is a USCG Inspection item.

ITEM 282 OILY BALLAST WATER MONITOR

Activate the Babcock and Bristol oily ballast monitor system.

1. Reassemble any sample lines opened up for lay up.
2. Prove system is operational.

NOTE: This is a USCG inspection item.

ITEM 285 OPEN ITEM

ITEM 290 SHIP'S REFRIGERATION & AIR CONDITIONING SYSTEMS

1. Reinstall any removed piping sections, valves, etc. which were removed to facilitate drying and D/H air circulation. Flush water lines prior to connecting to units. Bypass heat exchangers before flushing per Item 235.1. Clean salt water strainers until scale is absent.
2. Remove blocks from under refrigeration box doors. Chalk test doors for proper seal. Test safety releases. Close doors. Check box personnel alarm system.
3. Check two York refrigeration compressors and five WEDJ Inc. air conditioning units for proper lubrication level. Lube oil level will have been left above the top of the crankshaft seals per the deactivation specifications. Drain lube oil from the compressor sumps to lower the oil to the proper operating levels. Check systems for refrigerant charge and recharge as needed with Contractor furnished refrigerant.
4. Replace dryers prior to bringing system on line.
5. Activate systems. Bring box temperatures down to proper temperature range and prepare for loading.

300

ELECTRICAL

ITEM 305 CATHODIC PROTECTION SYSTEM

DATA: CAPAC Cathodic Protection System
Engelhard Systems
Union, New Jersey 07083

1. Remove all non-explosion proof wiring leads to the master unit located in the Ice Tunnel (1-77-1). Leave the master unit in place. Disconnect wiring leads to each anode, total 8 each, and the reference anode of the cathodic protection system. Thoroughly clean anodes, anode protective covers, wires and rope of all sea growth. Tag each item for identification to facilitate reinstallation at a later date. Stow onboard per the Chief Officer or CMS Representative's instruction. Remove all non-explosion proof wiring in ice tunnel leaving master unit in place for future operation. The anodes are placed in the following approximate locations:

01-15-1	01-15-2
1-60-1	1-60-2
	1-85-2 (Reference anode)
01-88-1	01-88-2
01-135-1	01-135-2

2. Remove all overboard anode hanging brackets and electrical cable leads (9 each). Tag each bracket with a water-proof tag, Contractor supplied, for future installation and store onboard per chief officer or CMS Representative. Restore all disturbed coatings with Owner's supplied paint per paint specifications.

ITEM 310 DEHUMIDIFICATION SYSTEM

The following steps shall be taken to deactivate the ship's dehumidification equipment.

DATA: Mfg.: CARGOCAIRE
Model: HC-500
Volts: 440 VAC
Location: Permanently mounted, 1-18-1 Fore Peak Space
Condensate drain: Bulkhead penetration to main deck

MFG.: EBAC Systems Inc., Williamsburg, Virginia
Model: CD-425
Volts: 460 VAC
Location: Temporarily mounted, 2-87-2, Aft Pumproom
Condensate drain: Bulkhead penetration at pumproom WTD.

MFG.: EBAC Systems Inc., Williamsburg, Virginia
Model: CD-100
Volts: 110 VAC
Location: Temporarily mounted, 2-118-1, Engine room
Condensate drain: Buckets

ITEM 310 DEHUMIDIFICATION SYSTEM continued

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

1. Blank-off Cargocaire bulkhead penetrations and fire main connections at the following locations:
 - a. 1 each, 6" bolted flange at 1-20-2 (Main Deck)
 - b. 1 each, 8" bolted flange at 1-20-2 (Main Deck)
 - c. 1 each, 8" welded flange at 1-24-1 (Ice Tunnel)
 - d. 1 each, 8" welded flange at 1-25-2 (Ice Tunnel)
 - e. 1 each, 8" bolted lighting flange at 1-86-1 (Ice Tunnel)
 - f. 1 each, 6" bolted flange to fire main at 1-18-1 (Ice Tunnel)
 - g. 1 each, 6" welded flange at 02-114-2 (Emergency Generator Room)
 - l. 1 each, 15" bolted square flange to 02-114-1 (Gyro Room)
2. Disconnect 6 each flexible hoses from fire main and store onboard per Chief Officer or CMS Representative. Disconnect condensate drain hoses and door dog at 1-83-1, Aft Pumproom WTD.
3. Disconnect Cargocaire unit electrical power source leaving components accessible for re-installation at deactivation. Tag each piece with identification and location to facilitate later reinstallation. Restore all disturbed coatings with Owner's supplied paint per paint specifications. Disconnect unit electrical power supply and store the following units per the Chief Officer or CMS Representative:
 - a. EBAC CD-425, at 2-87-2 (Aft Pumproom)
 - b. EBAC CD-100, a 02-118-1 (Engine room)
4. Close all main and stripping valves to cargo and ballast tanks (total 32 each), close all valves to the fire main. Close 6 each bolted cargo and ballast pump strainer covers in the Aft Pumproom.
5. Restore all ventilation and piping systems to original by reinstallation of removed ducting, piping, valves, strainers, drain plugs, valve bonnets, etc. Restore all disturbed coatings with Owner's supplied paint per paint specifications.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 315 FLOODING ALARM SYSTEM

1. Disconnect bilge alarms and remove entirely from each from each location listed below electrical leads, junction boxes, electrical fittings and temporary bilge alarms from the following spaces:
 - a. Motor/Pumproom bilge (5-24-1)
 - b. Forward Pumproom bilge (5-26-2)
 - c. Aft Pumproom bilge (4-87-0)
 - d. Aux. Machinery Room bilge (5-89-0)
 - e. Engine Room bilge (5-118-1)
2. Tag each component with Contractor provided, water-proof tags, identifying space and location for re-installation at deactivation. Store all components onboard per Chief Officer or CMS Representative.
3. Disconnect wire leads to Flying Bridge visual and audio alarms. Seal wire lead connections with Contractor supplied sealant.

ITEM 320 SHIP'S LIGHTING SYSTEMS

1. Install lights, energize circuits, and test all the circuits including running lights, range lights, gangway lights, flood lights, mast lights, stern lights, main and emergency lighting.
2. Open all fore and aft mast light fixtures. Inspect and service as required. Replace defective bulbs and sockets. Close fixtures, provide new gaskets if required. Demonstrate operation of all lights to chief officer or CMS Representative on completion.

ITEM 322 CARGO, DEBARKATION, SIGNAL, & SEARCH LIGHTS

1. Using new bolts, nuts and lock-washer where applicable, install the following weather deck lights. Restore electrical connections. Demonstrate light operation to CMS Representative on completion of installation. Restore all disturbed coatings, prime and coat new bolts and fittings per the paint specifications with Owners supplied paint. Each light is tagged with its location:
 - a. Two 18-inch searchlights
 - b. One signal light
 - c. Eight cargo and debarkation lights

ITEM 325 CARGO PUMP REMOTE SHUT-DOWN SWITCHES

1. On completion of ITEM 225 (Cargo Oil/Ballast Piping and Pumps), and on completion cargo, stripping and ballast pump closure and testing, test all pump remote shut-down switches located in the Ice Tunnel and Ice Tunnel weather deck bulkheads.
2. Test the forward and aft Pumproom blower shut-down switches at the same time. Ascertain that the remote shut-down enclosure doors and latches operate freely.

ITEM 330 INSULATION (MEGGER) READINGS

1. Obtain and record 500 volt megger readings of every power, lighting, and intercommunication circuits throughout ship if more than 3 months since last test. Compare with readings taken during deactivation and during retention period.
2. Provide a written report of all readings to the CMS Representative.

WARNING: DO NOT megger the Central Control Console, the Bridge Control Console, the Remote Control Panel for diesel generators, nor any other item having solid state components.

ITEM 360 GALLEY EQUIPMENT

1. Activate the following equipment located in the Ship's galley:
 - a. GE Oven Model CN63
 - b. GE Deep Fat Fryer Model DK20
 - c. GE Marine Range Model MR73A
 - d. GE Marine Dishwasher Model SK501
2. Test operate for a minimum of 60 minutes and check all operating characteristics, such as temperatures, amps, voltage, etc., against manufacturer's instruction books.
3. In addition, service, test, and activate the domestic refrigerators and ice makers located in ship's galley, officer and crew messes, lounges and pantries. Check out refrigerators in officer and crew Staterooms for proper operation.

ITEM 370 BATTERIES

1. Reinstall, connect, and service in place batteries, or those procured in various battery lockers and racks:
 - a. General Alarm and IC: Eight each, 6 volt, 100 AH, 02-104-2.
 - b. Emergency Radio: Two each, 6 volt, 500 AH, 02-104-2.
 - c. Data Logger: 12 volt, 4 SAW, Gel-Cell located inside Data Logger in Aux. Machinery Space.
 - d. Fire Detection System: Five each, 6 volt, 8 AH, Power Sonic Model.
 - e. Emergency Generator Start System: Four 6 Volt 8D
2. Prove battery charging systems are operational after batteries are installed.

ITEM 380 RADIO EQUIPMENT

1. The CMS Representative will provide a qualified marine technical service representative to activate the ship's radio equipment to include: HF, MF, SSB, RDF, COMSAT, SITOR, EMERGENCY and lifeboat radios. Test auto-alarms, antenna, weather fax and associated equipment. Test VHF and ship-to-ship communications equipment. Demonstrate operation of all systems to the ship's master and CMS Representative.
2. The technician shall also attend the ship's maneuvers and the commencement of sea trials to provide a deviation table for the RDF. The work should be accomplished at the same time as magnetic compass deviation is established during initial sea trials. See Item 385.
3. Conduct an inspection of equipment including the capability to transmit and receive. The technician shall provide a letter confirming operation of all communications equipment and demonstrate operation of all systems to the ship's master and CMS Representative.

Note: The vessel's Safety Radiotelegraphy Certificate is issued annually by ABS. The ABS inspector must attend a demonstration of the above equipment for certification purposes.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 385 NAVIGATION EQUIPMENT

1. Reinstall magnetic compasses (stored in pilot house) on the flying bridge and connect electrical lighting circuits. This is a first time activation item only.
2. The Contractor shall provide the services of a qualified compass adjuster to service the master and steering magnetic compasses and to calibrate (adjust compensating magnets) and provide a deviation chart for each compass at the beginning of sea trials. This work should be accomplished during the ship maneuvers needed to accommodate calibration of the ship's radio direction finder. See Item 380.
3. The CMS Representative will provide the services of a marine gyro compass service agent to service entire gyro system including relays, repeaters, course recorder, and auto pilot. . The service agent shall demonstrate operation of all systems to the ship's master and CMS Representative.
4. Provide qualified service technicians to activate and service radar's, RDF, depth finder and Loran, Satellite Navigator, and Doppler Speed Log. .Demonstrate operation of all systems to the ship's master and CMS Representative.

NOTE: This is a USCG inspection item.

ITEM 387 WIND INDICATORS

1. Install the two Bendix wind/speed transmitters on the port and starboard yardarms 05-91-1 and 05-91-2. Demonstrate operation of the equipment to the ship's master and CMS Representative.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

400HULLITEM 402HULL BLANKS

1. Furnish services of divers to remove all hull and sea chest blanks listed below. Retain all blanks, nuts, bolts and gaskets for storage onboard the vessel in area designated by the Chief Mate or CMS Representative. Prior to stowing on board, all items must be pressure washed to remove all sea growth. All plates, flanges and gaskets shall be marked with their location and arrows indicating up and aft for reinstallation. Bolts and nuts shall be wired to each plate and gaskets. The Contractor shall confirm the removal of each blank plate or flange and indicate missing or lost nuts and bolts, defective gaskets to CMS Representative for later replacement.

Item No.	Name	Size of Hull Opening	P/S	Frame	Height Above Keel
1	Overboard Discharge	12"	P	117	4'-6"
2	Bilge and Ballast Pump Suction Seachest	2'-0" x 4'-0"	S	117	3'-9"
3	Boiler Blow Down	4"	P	113	7'-0"
4	Miscellaneous Saltwater Overboard Discharge	4"	S	113	7'-0"
5	Fire Pump Suction Seachest	2'-0" x 3'-0"	P	107	3'-8"
6	Main Engine and Auxiliary Generator Cooling System Seachest	2'-0" x 6"	P	103	9'-0"
7	Main Engine and Auxiliary Generator Cooling System Seachest	2'-0" x 6"	S	103	9'-0"
8	Main Engine and Auxiliary Generator Cooling System Seachest	2'-0" x 4'-0"	P	103	7'-6"
9	Main Engine and Auxiliary Generator Cooling System Seachest	2'-0" x 4'-0"	S	103	7'-6"
10	Fire Main and Distilling Plant Suction Seachest	2'-0" x 4'-0"	S	102	8'-0"
11	Overboard Discharge	4"	P	100	11'-1"
12	Cargo Pump Suction Seachest	2'-0" x 3'-0"	P	90	1/2"
13	Cargo Pump Suction Seachest	2'-0" x 3'-0"	S	90	1/2"
14	Overboard Discharge	6"	P	88	2'-6"
15	Overboard Discharge	6"	S	88	2'-6"
16	Overboard Discharge	6"	P	25	5'-0"
17	Cargo Bilge and Ballast Suction Seachest	2'-0" x 3'-0"	P	25	2'-5"
18	Bilge and Ballast Suction Seachest	2'-0" x 2'-6"	S	22	2'-9"
19	Overboard Discharge	4"	S	21	5'-0"

NOTE: This item shall be commenced within twenty-four (24) hours of notice of activation.

ITEM 403

PROPELLER CLEANING

During the hull blank removal (Item 402) arrange to have the port and starboard propellers, blades and hubs, fully mechanically cleaned to remove all sea growth and related fouling. During the operation the divers are to inspect the propellers and exposed shafts to insure that they are clear of fish lines, rope and other obstructions. The divers shall submit pictures, covering the forward and aft profiles of the cleaned propellers on completion. Care shall be taken to prevent damage to propeller blade and shaft seals.

ITEM 405

LIFEBOATS, DAVITS AND WINCHES

1. Lifeboats:
Remove lifeboat covers and wooden support frames from two 35-person motor lifeboats. Refill engines with lube oil from ship's stores if required. Fill fuel tank with marine gas oil (Diesel No. 2) as required. Test run engines. Reinstall rubber balls in automatic drain plug. Ship's crew will lay out and provisions and stores for boats for USCG Inspection. After approval by USCG, ship's crew will stow all equipment in the respective lifeboat.
2. Gravity Davits:
Grease davit arm rollers, blocks, sheaves, wire, Rottmer releasing gear, and winches requiring lubrication. Lower boats a minimum of three times to rails edge to insure free operation prior to USCG inspection.
3. USCG Testing:
 - a. Provide 3,015 kg of Contractor supplied weights per boat. Position weights in boats to provide for equal distribution. Breast ship off the dock as required by slacking appropriate lines and utilizing one harbor tug. Test lifeboat davits by lowering both boats to water using winch brakes to control rate of drop.
 - b. When the lifeboat touches the water the ship's crew will board and start the lifeboat engine, release lifeboat from the boat falls, and operate boat in ahead and astern positions for 15 minutes. The crew will connect lifeboat to falls and disembark. Hoist both boats aboard, for securing in davit rests by the ship's crew. Turn over boat covers to ship's Chief Mate for stowage onboard.

NOTE: This is a USCG inspection item.

ITEM 406 INFLATABLE LIFE RAFTS

1. The two 25-person inflatable life rafts are stowed onboard, in their racks. The ship's crew will install the hydro-static releases for USCG inspection. In the event that the life raft inspection dates are not acceptable, the CMS Representative will make arrangements for replacement or servicing by an approved facility in Kobe or Yokohama. If necessary, assist the crew by rigging the rafts ashore for servicing and returning to their racks after servicing. If necessary, assist the ship's crew by rigging the rafts ashore for servicing, and back aboard on completion of servicing.

NOTE: This is a USCG inspection item.

ITEM 408 RING LIFE BUOYS

The ship's crew will replace water-light batteries from ship's supply as required and place ring life buoys in their appropriate location. The Contractor's assistance is not required.

NOTE: This is a USCG inspection item.

ITEM 415 FIRE FIGHTING EQUIPMENT

1. CO₂ Fixed Systems: Provide a USCG approved technician to reactivate the CO₂ fixed systems in the following areas:
 - a. 36 each 75 lb. bottles in CO₂ Room 2-20-0
 - b. 5 each 50 lb. bottles in Forward Pump Room 3-25-0
 - c. 5 each 50 lb. bottles in Aft Pump Room 3-87-0
 - d. 2 each 100 lb. bottles in Engine Room
 - e. 2 each 75 lb. bottles in Emergency Generator Room
3. Test all operating levers to insure freedom of movement and remote operation. Replace broken glass operating lever covers as required with ship's spares. Test all alarms for delay and audio level. Test all remote valves to insure free operation. Connect controls, flexible piping and remove locking pins from operating levers.
4. Portable Fire Extinguishers:
The ship's crew will inventory and position all Dry-Powder and CO₂ portable fire extinguishers as required. Weighing is only required if 6 months has elapsed since last service (annual requirement) as indicated on the inspection tags. If required, the Contractor shall arrange for the USCG Approved service technician to conduct weight tests and equipment serviceability survey in conjunction with servicing the fixed CO₂ system above.
- 5.. Fire stations:
Assist the ship's crew in collecting fire hoses from storage areas, interior and exterior fire stations. Check each hose for serviceable gaskets, connect the

ITEM 415 FIRE FIGHTING EQUIPMENTcontinued

hoses in an end-for-end loop for pressure testing. The Contractor is to provide dock or sea water pressure to 125 psi for hydro-testing all hoses. Assist the ship's crew as required in disconnecting, draining and stenciling each hose with the test date. The ship's crew will collect and install at fire stations throughout ship. Hydro testing is required if 6-months has elapsed since last USCG inspection (annual requirement).

- 6.. During the vessel's activation the ship's crew will be required by the USCG to hold a fire drill. Following the activation of the ship's main fire line, the Contractor and ship's engineers will test the fire-pumps located in compartments 4-20-0 and 4-91-0 to insure operation, line up and adequate on deck discharge pressure with each pump separately supplying two each, 1-1/2 inch fire hoses fitted with all-purpose nozzles.

NOTE: This is a USCG inspection item.

ITEM 433 WEATHER DECK SCUPPERS AND DRAINS

1. Scupper Extensions
Remove six each port and six each starboard side shell and deck scupper extensions. Restore coatings per paint specifications with Owner's supplied paint.

ITEM 435 HOSE GEAR

1. Remove cargo hose gear from forward stores. Inspect all blocks and sheaves for free operation. Pressure grease all blocks, goose neck and winch fittings. Rig port and starboard hose booms with topping lifts, runners and guys. Lubricate topping lift and runner wires with Contractor supplied heavy duty wire rope lubricant.
2. Activate winches, test hydraulic and electrical operation. Top booms and demonstrate operation to CMS Representative and leave ready for use.

NOTE: ALATNA is equipped with electro/hydraulic hose boom winches and electric topping lift winches. CHATTAHOOCHEE has electric hose boom and topping lift winches.

ITEM 445 WATERTIGHT AND WEATHER-TIGHT CLOSURES

1. Open and operate all watertight and weather-tight doors, hatches, airports and other closures which have been locked and/or wired shut from ship's interior. Replace rubber gasket material as required from ship's stores. Lubricate door dogs and closure hardware. Chalk test mating surfaces to show proper seal. 23 doors, 9 hatches, and 44 airports are to be dealt with. Note that two of the hatches are located on stack. A complete listing is included below.
2. Remove temporary covers from shaft RPM counters and the rudder angle indicators from port and starboard bridge wings.
3. The Pilot House windows shall be opened and closed to insure ease of operation and adequate sealing. These windows are approximately 32" x 32" made by Kearfott Company. Thirteen (13) windows to be dealt with.
4. List of doors, hatches, and airports to be dealt with:

a. Watertight Doors 26"x 72"

<u>Compartment</u>	<u>Door</u>
Battery Locker	02-102-2
Chart Room	02-100-1
Gyro Room	02-112-1
Emergency Gen. Room	02-114-1
Fan Room	02-120-1
Fan Room	02-120-2
Stack Door	03-108-1
Passage Way	01-91-0
Passage Way	01-105-1&2
Cleaning Gear Locker	01-104-1&2
Passage Way	02-124-1
Passage Way	01-84-1
Passage Way	01-84-2
Passage Way	01-58-1
Passage Way	01-58-2
Passage Way	01-24-1
Passage Way	01-24-2
CO ₂ Room	01-23-1
Fwd Pump Room	01-25-2
Aft Pump Room	01-85-1
Fan Room	01-20-0

b. Hatches

<u>Size</u>
01-5-1 24" x 24"
01-23-1 36" x 36"
01-111-2 25" diameter
01-25-2 36" x 36"
01-88-1 36" x 36"
01-131-1 35" x 35"
01-145-1 15" x 35"

ITEM 445WATERTIGHT AND WEATHER-TIGHT CLOSURES continued

b.	<u>Hatches</u>	<u>Size1</u>
	03-140-0	15" x 26" Top of Stack
	03-140-1	15" x 26" Side of Stack

c.	<u>Airports</u>	
	<u>Location</u>	<u>Quantity</u>
	1-44-1	One
	1-51-2	One
	1-64-2	One
	1-70-1	One
	1-75-2	One
	1-91-3	Two
	1-91-1	One
	1-91-4	Two
	1-99-1	One
	1-105-3	One
	1-110-1	One
	1-115-1	One
	1-120-1	One
	1-126-1	One
	1-126-2	One
	1-120-2	Three
	1-110-2	Two
	1-105-6	One
	1-99-2	One
	01-91-2	Two
	01-91-0	One
	01-91-1	One
	01-97-2	One
	01-97-1	One
	01-106-1	One
	01-106-2	One
	01-114-1	One
	01-114-2	One
	01-115-0	Five
	02-97-4	One
	2-102-1	One
	02-102-2	One
	02-101-1	One
	02-96-1	One

5. Remove expanded metal manhole covers from fore and after peak tanks, and port and starboard chain lockers. Reinstall all manhole covers throughout the vessel. List defective gaskets, bolts, nuts and studs and present to the CMS Representative for repair and/or replacement. On completion of closing all manholes the Master will ascertain that all closures are secure. Tag and store removed expanded metal covers per the chief officer or CMS Representative for later utilization. Manholes are located as follows:

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 445 WATERTIGHT AND WEATHER-TIGHT CLOSURES continued

<u>Each</u>	<u>Compartment</u>	<u>Each</u>	<u>Compartment</u>
1	2-8-0		
1	3-13-1	1	3-13-2
1	3-19-0		
1	1-20-1	1	1-20-2
1	4-24-1	1	4-26-2
(ALAT) 1	1-88-1	(ALAT) 1	1-88-2
1	1-89-1	1	1-89-2
(ALAT) 3	4-89-1	(ALAT) 3	4-89-2
(CHAT) 2	4-89-1	(CHAT) 2	4-89-2
1	02-97-1	1	02-97-2
1	1-120-1	1	2-120-2
1	2-131-2	1	1-128-0
1	2-142-1	1	2-142-2

NOTE: Engine and Control Room tank tops and manholes are not included in the list above. The Chief Engineer will ascertain that all closures are secure during the vessel's activation.

ITEM 447 **VENTILATION TERMINALS**

1. Open up all watertight ventilation closures, approximately 18, and remove from mating surfaces. Replace rubber gaskets as required. Lubricate closure hardware and chalk test mating surfaces to show proper seal. Locations are as follows:

<u>Location</u>	<u>Approximate Size</u>
1-20-0	8 x 8 inches
1-27-1	6 x 8 inches
1-20-2	14 x 20 inches
1-20-1	2 x 2 feet two (20) each
01-24-1	12 inch round
01-87-1	15 x 18 inches
01-86-1	12 x 15 inches
01-85-1	12 x 15 inches
01-85-2	8 x 15 inches
01-90-1	12 x 18 inches
1-141-1	24 x 18 inches
1-141-2	12 x 18 inches
02-114-2	36 x 24 inches
03-110-1	14 x 14 inches two (2) each
03-120-1	14 x 14 inches two (2) each

2. Remove dogged-flange steel covers from vent terminals. Stencil removal locations on the inside each cover for activation reference. Store 02 and 03 Level dogged covers as appropriate in Stack House (total 8 each). Restore disturbed coatings per specifications with owner's supplied paint. Locations are as follows:

<u>Location</u>	<u>Approximate Size</u>
03-104-2	36 x 24 inches
03-102-1	42 x 72 inches
03-102-2	36 x 24 inches
03-107-1&2	24 x 72 inches
03-117-1	42 x 42 inches two (2) each
03-111-2	42 x 42 inches two (2) each
02-123-0	42 x 24 inches two (2) each
01-87-0	Disconnect flange and install 15 inches diameter blank
01-87-0	12 x 15 inches
01-22-2	8 x 8 inches
Exhaust Vertical Stack	24 x 36 inches

3. Remove dogged-flange steel cover from ship's whistle on forward side of stack 11 enclosure and stow in stack interior. Reactivate whistle and demonstrate operation to CMS Representative. Demonstration to include operation of automatic whistle timer.

M/V ALATNA OR M/V CHATTAHOOCHEE - ACTIVATION - SEA TRIALS

ITEM 490

NAME BOARDS

Remove ship's name boards from Wheelhouse and reinstall at 03 level outboard of stack in brackets provided on port and starboard hand rails. Secure with stainless steel nuts and bolts.